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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,938	06/08/2004	Yu Liu	SISP0014USA	3937

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EXAMINER

AMIN, JWALANT B

ART UNIT	PAPER NUMBER
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2676

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/709,938	LIU ET AL.	
	Examiner	Art Unit	
	Jwalant Amin	2676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06/08/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06/08/2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Oath/Declaration

1. The citizenship of each inventor indicates "TW" and "R.O.C." as the country of citizenship at different times in the same Oath/Declaration document. The examiner suggests to make appropriate changes.

Specification

1. The abstract of the disclosure is objected to because of the following:
 - The type size is not in accordance with 37 CFR 1.58(c) and 1.52(b)(2)(ii) which recommends a type size of 12.
 - The margin spacing is not in accordance with 37 CFR 1.52(a)(1)(ii).

Correction is required. See MPEP § 608.01(b).

2. The disclosure is objected to because of the following informalities:
 - The type size is not in accordance with 37 CFR 1.58(c) and 1.52(b)(2)(ii) which recommends a type size of 12.
 - The margin spacing is not in accordance with 37 CFR 1.52(a)(1)(ii).

Appropriate correction is required.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "a font display co-processor 50" on page 12 lines 3-4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to

avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "20" has been used to designate both font display system and font display co-processor. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "20" and "50" have both been used to designate font display co-processor. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any

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amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

6. The drawings are objected to because of the following:

- Font in the term "font code table" is misspelled as "fond" in Fig. 5 step 110.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

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the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

7. Claims 1-19 are objected to because of the following informalities:

- The type size is not in accordance with 37 CFR 1.58(c) and 1.52(b)(2)(ii) which recommends a type size of 12.
- The margin spacing is not in accordance with 37 CFR 1.52(a)(1)(ii).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "directly counting" in claim 17 is a relative term which renders the claim indefinite. The term "directly counting" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. For the purpose of prior art reference the examiner interprets the term "directly counting" in the

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phrase "directly counting the relative location of the font code in the mapping table" as "indexing".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Opstad et al. (US Patent No. 6,672,770).

10. Regarding claim 1, Opstad teaches a font display co-processor (Fig. 3, the font subsystem with a font server corresponds to the font display co-processor), transmitting font information from the system CPU to the co-processor (col. 4 lines 32-36; request for a font corresponds to transmitting font information; application program corresponds to the system CPU), loading a mapping table and a font bitmap table into the font display co-processor (col. 4 lines 36-38, col. 5 lines 19-24; retrieving corresponds to loading; stored corresponds to loading; various data tables corresponds to mapping table and font bitmap table; the font subsystem with a font server corresponds to the font display co-processor), the font display co-processor corresponding the font information to a font index according to the mapping table (Fig. 6, col. 5 lines 46-57;

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image data ... font corresponds to font information; index table corresponds to mapping table); the font display co-processor corresponding the font index to a font bitmap according to the font bitmap table (col. 5 lines 39-44 and lines 55-57; index table corresponds to mapping table; color table corresponds to font bitmap table), and the font display co-processor transmitting the font bitmap to a display module (col. 6 lines 3-6, col. 5 lines 16-18, col. 4 lines 10-12; font subsystem with a font server corresponds to font display co-processor; glyph with appropriate colors corresponds to font bitmap; provided corresponds to transmitting).

11. Regarding claim 2, Opstad teaches loading a font code table to the font display co-processor (col. 4 lines 36-38; col. 5 lines 19-21 and 46-49; retrieving corresponds to loading; stored corresponds to loading; font subsystem with a font server corresponds to font co-processor; bitmap tables correspond to font code table).

12. Regarding claim 3, Opstad teaches a font display co-processor corresponding the font information to a font code according to the font code table (Fig. 6, col. 5 lines 46-54; image data ... of a font corresponds to font information; respective bitmap tables corresponds to font code table; represented by 2 bits per pixel corresponds to font code).

13. Regarding claim 4, Opstad teaches a font display co-processor corresponding the font code to the font index according to the mapping table (Fig. 6, col. 5 lines 53-57 and lines 61-63; 2 bit data values within the bitmaps and the index table corresponds to font code and the font index respectively; index table corresponds to the mapping table).

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14. Regarding claim 5, Opstad teaches a font display co-processor loading the font bitmap to a memory of the display module (Fig. 2, col. 5 lines 16-18, col. 6 lines 3-6; glyph image with the appropriate colors corresponds to the font bitmap; glyph cache associated with the imaging system corresponds the memory of the display module (imaging system provides the glyph image to the display module)).

15. Regarding claim 6, Opstad teaches a font display co-processor comprising an effect making unit (col. 1 lines 56-65; employ multiple colors within the image of a single character or symbol corresponds to effect making unit (it is inherent to the font subsystem with the font server)).

16. Regarding claim 7, Opstad teaches that the effect making unit adds predetermined special effects to the font bitmap (col. 1 lines 56-65; employ multiple colors within the image of a single character or symbol corresponds to effect making unit (it is inherent to the font subsystem with the font server); employ multiple colors/shadow effect corresponds special effects; image/edge of a character corresponds to font bitmap; desirable corresponds to predetermined).

17. Regarding claim 8, Opstad teaches that added predetermined special effects are selected from a group consisting of colorful fonts, animation fonts, and 3D fonts (col. 1 lines 56-65; shadow effects corresponds to special effects; multiple colors within the image of a single character or symbol corresponds colorful fonts; desirable corresponds to predetermined).

18. Regarding claim 9, Opstad teaches a font display co-processor comprising a memory used to store font information, a mapping table, and a font bitmap table (Fig. 3,

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col. 5 lines 19-24; the font subsystem with a font server corresponds to the font display co-processor; various data tables corresponds to a mapping table and a font bitmap table; values of individual pixels within the glyph images corresponds to font information; suitcase of the font subsystem corresponds to memory of the co-processor); a processing unit electrically connected to the memory used to load the font information, the mapping table, and the font bitmap table to the memory (Fig. 3, col. 5 lines 13-15, col. 3 lines 40-42; scaler corresponds to a processing unit; retrieves corresponds to load; necessary data corresponds to font information, the mapping table and the font bitmap table; communicates with ... internal bus 22 corresponds to electrically connected); a receiving unit electrically connected to the system CPU to receive the font information from the system CPU (Fig. 2, Fig. 3, col. 3 lines 40-42, col. 4 lines 32-36, col. 5 lines 10-13; communicates with ... internal bus 22 corresponds to electrically connected; font server corresponds to a receiving unit; font object corresponds to font information; application program corresponds to the system CPU); and a transforming unit electrically connected to the memory and the receiving unit (col. 3 lines 40-42, Fig. 3, col. 4 lines 61-67, col. 5 lines 10-16; scaler corresponds to a transforming unit; interpreting and processing corresponds to transforming; communicates with ... internal bus 22 corresponds to electrically connected; suitcase of the font subsystem corresponds to memory of the co-processor; font server corresponds to a receiving unit) for transforming the font information into a font code (Fig. 6, col. 5 lines 46-54; image data ... of a font corresponds to font information; respective bitmap tables corresponds to font code table; represented by 2 bits per pixel

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corresponds to font code), or transforming a font code into a font index (Fig. 6, col. 5 lines 53-57 and lines 61-63; 2 bit data values within the bitmaps and the index table corresponds to font code and the font index respectively; index table corresponds to the mapping table), or transforming a font index to a font bitmap (col. 5 lines 39-44 and lines 55-57; index table corresponds to mapping table; color table corresponds to font bitmap table; 2 bit data values within the index table corresponds the font index; entries with the color specifications within a color table corresponds to font bitmap).

19. Regarding claim 10, Opstad teaches that the processing unit is connected to a display memory and the processing unit is used to store the font bitmap in the display memory (Fig. 2, Fig. 3, col. 5 lines 16-18; scaler corresponds to processing unit; glyph cache associated with the imaging system corresponds to display memory; glyph image corresponds to the font bitmap; provided corresponds to store).

20. Regarding claim 11, Opstad teaches an effect making unit used to add predetermined special effects to the font bitmap (col. 1 lines 56-65; employ multiple colors within the image of a single character or symbol corresponds to effect making unit (it is inherent to the font subsystem with the font server); employ multiple colors/shadow effect corresponds special effects; image/edge of a character corresponds to font bitmap; desirable corresponds to predetermined).

21. Regarding claim 12, Opstad teaches that predetermined special effects are selected from a group consisting of colorful fonts, animation fonts, and 3D fonts (col. 1 lines 56-65; shadow effects corresponds to special effects; multiple colors within the

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image of a single character or symbol corresponds colorful fonts; desirable corresponds to predetermined).

22. Regarding claim 13, Opstad teaches a computer system comprising a system CPU for controlling system operations (Fig. 1, col. 3 line 41, col. 4 lines 10-11; application program (residing on CPU) corresponds to system CPU); a font display co-processor comprising a memory used to store a mapping table and a font bitmap table (Fig. 3, col. 5 lines 19-24; the font subsystem with a font server corresponds to the font display co-processor; various data tables corresponds to a mapping table and a font bitmap table; suitcase of the font subsystem corresponds to memory of the co-processor); a processing unit electrically connected to the memory used to load the font information, the mapping table, and the font bitmap table to the memory (Fig. 3, col. 5 lines 13-15, col. 3 lines 40-42; scaler corresponds to a processing unit; retrieves corresponds to load; necessary data corresponds to font information, the mapping table and the font bitmap table; communicates with ... internal bus 22 corresponds to electrically connected); a receiving unit connected to the system CPU to receive the font information from the system CPU (Fig. 2, Fig. 3, col. 3 lines 40-42, col. 4 lines 32-36, col. 5 lines 10-13; communicates with ... internal bus 22 corresponds to electrically connected; font server corresponds to a receiving unit; font object corresponds to font information; application program corresponds to the system CPU); and a transforming unit electrically connected to the memory and the receiving unit (col. 3 lines 40-42, Fig. 3, col. 4 lines 61-67, col. 5 lines 10-16; scaler corresponds to a transforming unit; interpreting and processing corresponds to transforming; communicates with ... internal

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bus 22 corresponds to electrically connected; suitcase of the font subsystem corresponds to memory of the co-processor; font server corresponds to a receiving unit) for transforming the font information into a font code (Fig. 6, col. 5 lines 46-54; image data ... of a font corresponds to font information; respective bitmap tables corresponds to font code table; represented by 2 bits per pixel corresponds to font code), or transforming a font code into a font index (Fig. 6, col. 5 lines 53-57 and lines 61-63; 2 bit data values within the bitmaps and the index table corresponds to font code and the font index respectively; index table corresponds to the mapping table), or transforming a font index to a font bitmap (col. 5 lines 39-44 and lines 55-57; index table corresponds to mapping table; color table corresponds to font bitmap table; 2 bit data values within the index table corresponds the font index; entries with the color specifications within a color table corresponds to font bitmap); and a display module connected to the font display co-processor for displaying the font bitmap (Fig. 2, col. 4 lines 36-38; imaging system provides the glyph image to the display module; font subsystem with the font server corresponds to font display co-processor).

23. Regarding claim 14, Opstad teaches a font display coprocessor with an effect making unit electrically connected to the transforming unit for adding predetermined special effects to the font bitmap (col. 3 lines 40-42, Fig. 3, col. 1 lines 56-65, col. 5 lines 10-16; scaler corresponds to a transforming unit; employ multiple colors within the image of a single character or symbol corresponds to effect making unit (it is inherent to the font subsystem with the font server); employ multiple colors/shadow effect corresponds special effects; image/edge of a character corresponds to font bitmap;

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desirable corresponds to predetermined; communicates with ... internal bus 22 corresponds to electrically connected).

24. Regarding claim 15, Opstad teaches that predetermined special effects are selected from a group consisting of colorful fonts, animation fonts, and 3D fonts (col. 1 lines 56-65; shadow effects corresponds to special effects; multiple colors within the image of a single character or symbol corresponds colorful fonts; desirable corresponds to predetermined).

25. Regarding claim 16, the font information indicates which font is to be displayed on the display module (col. 4 lines 10-16; display corresponds to display module; designates ... identification of the font for the corresponding character corresponds to indicates the font; character corresponding to the keystroke corresponds to font information).

26. Regarding claim 17, Opstad teaches a font display coprocessor will be able to locate the associated font bitmap table by directly counting the relative location of the font code in the mapping table (col. 5 lines 54-57; glyph corresponds to font information; 2-bit data corresponds to font code; index table corresponds to mapping table; color table corresponds to font bitmap table).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

27. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Opstad et al. (US Patent No. 6,672,770) as applied to claim 13 above, and further in view of Hong (US Pub. No. 2002/0093536).

28. Regarding claim 18, Opstad discloses all of the claimed limitations as stated above in claim 13, except that the system CPU is a baseband processor. However, Hong teaches a baseband processor used in a mobile phone (page 2 col. 1 lines 66-67, and col. 2 lines 1-5). Therefore, it would have been obvious to one of ordinary skill in the art at the time the present invention was made to use a baseband processor as taught by Hong, for the system CPU of Opstad to reduce power consumption.

29. Regarding claim 19, Opstad discloses all of the claimed limitations as stated above in claim 13, except that the computer system is a mobile phone or a PDA. However, Hong teaches a portable terminal such as a mobile phone (page 2 col. 1 lines 25-27). Therefore, it would have been obvious to one of ordinary skill in the art at the time the present invention was made to use a mobile computing device such as a mobile phone as taught by Hong for the font display system of Opstad, so that the

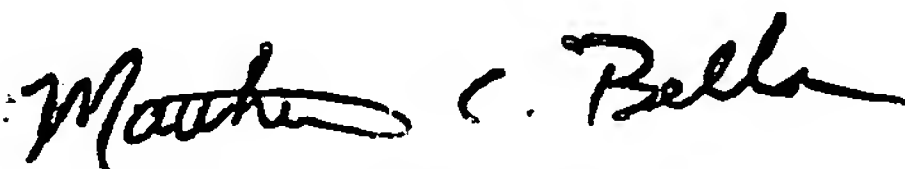
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mobile computing devices have better processing performance by accelerating font display.

30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jwalant Amin whose telephone number is 571-272-2455. The examiner can normally be reached on Monday - Friday 9:00 a.m. - 5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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